ASSIGNMENT 6

Textbook Assignment: "Parallel Projections," pages 6-1 through 6-41.

6-1. In oblique projections, you should place the face of the object with what feature parallel to the picture plane?

1. The shortest dimension
2. The longest dimension
3. The face with the most flat surfaces
4. The face with the least number of sides

6-2. When you draw an object in oblique projection where the longest dimension conflicts with the most irregular surface, you should place the irregular surface parallel to the picture plane.

1. True
2. False

6-3. In oblique projections, lines perpendicular to the plane of projection that project in true length are at what degree of angularity to the horizontal plane?

1. >45°
2. <45°
3. 45°
4. ^45°

6-4. Lines perpendicular to the plane of projection project in what length?

1. True
2. Infinite
3. Foreshortened
4. Proportioned

6-5. To emphasize features on the side of an object, you should draw receding lines at what angle to the plane of projection?

1. 45°
2. 60°
3. Greater than 45°
4. Less than 45°

6-6. In oblique projections, how should you draw receding lines in relation to the plane of projection?

1. Parallel only
2. Perpendicular only
3. Both perpendicular and parallel
4. At any angle other than perpendicular

6-7. How should you decrease distortion in oblique projections?

1. By placing the projection in correct scale
2. By reducing the length of the receding lines
3. By placing the projection obliquely to the plane of projection
4. By enlarging the dimensions parallel to the plane of projection and reducing the dimension of the receding axis

6-8. You should always draw the receding lines to half the scale of the front view in which of the following types of drawings?

1. Isometric
2. Cavalier
3. Cabinet
4. Perspective

6-9. You should draw the projectors to form an angle of 45° in what type of oblique projection?

1. Parallel
2. Cabinet
3. Caravaggio
4. Cavalier

6-10. Which of the following angles should you use to draw the receding axes of cavalier projections?

1. 30°
2. 45°
3. 60°
4. 90°

6-11. In oblique projections, a half circle parallel to the plane of projection appears as what shape?

1. A parabola
2. A partial ellipse
3. A half circle
4. A hyperbola

6-12. When using the four-center approximate ellipse method of drawing circles in cavalier projections, how should you locate the centers of the intermediate arcs?

1. Erect 45° bisectors to the inscribing parallelogram
2. Erect parallel bisectors to the circumscribing parallelogram
3. Erect horizontal and vertical bisectors to the inscribing parallelogram
4. Erect perpendicular bisectors to the circumscribing parallelogram

6-13. When drawing a circle oblique to the plane of projection in a cabinet drawing, by what length should you reduce the receding axis?

1. 1/2
2. 2/3
3. 3/5
4. 5/7

6-14. What type of sections can you show in oblique cabinet projections?

1. Broken-out sections only
2. Half sections only
3. Full sections only
4. All types of sections

6-15. Which of the following rules of dimensioning is of primary importance?

1. All lines and arrowheads must appear outside of the object to which they apply
2. All dimension lines, extension lines, and arrowheads must be lettered horizontally and legible from the bottom of the drawing
3. All dimension lines, extension lines, and arrowheads must lie in the planes of the object to which they apply
4. All lines and arrowheads must be aligned to the right side of the elevation

6-16. In orthographic projections, the technique you use to represent an object on the plane of projection involves which of the following elements?

1. The use of projectors that are parallel to each other and perpendicular to the plane of projection
2. The assumption that the viewer is infinitely distant from the object and its plane of projection
3. The assumption that the viewer is midway between the object and its plane of projection
4. The use of projectors that converge at a central point

6-17. What common feature classifies axonometric drawings as orthographic projections?

1. Only one plane of projection is shown
2. Three faces of the object are shown
3. The object is rotated into the plane of projection
4. The projectors are perpendicular to the plane of projection

6-18. A drawing that shows three faces of an object in one view and presents the object as it approximately appears to the observer is drawn to what type of projection?

1. Axonometric
2. Orthographic
3. Cabinet
4. Quadromatic

6-19. What is a distinguishing feature of axonometric projections?

1. The position of the views in relation to the plane of projection
2. The inclined position of the object to the plane of projection
3. The lack of distortion in the views
4. The position of the projectors to the plane of projection

6-20. Which of the following projections indicates equally foreshortened surfaces?

1. Oblique
2. Cabinet
3. Isometric
4. Orthographic

6-21. In isometric projections, isometric planes have what angular relationship at the intersection of the isometric axes?

1. 30°
2. 60°
3. 90°
4. 120°

6-22. When you make an isometric scale, what angle should you make with the horizontal?

1. 30°
2. 45°
3. 60°
4. 90°

6-23. Which of the following lines is an isometric line?

1. A line bisecting the isometric angles
2. A line parallel to the vertical axis
3. A line connecting isometric axes
4. A line perpendicular to isometric axes

6-24. Any line not parallel to the isometric axes is known as what type of line?

1. Nonisometric
2. Perspective
3. Foreshortened
4. Oblique

6-25. What is the purpose of an isometric scale?

1. To lay off intersecting lines
2. To project the object onto the plane of projection
3. To measure foreshortened lines
4. To measure diagonal lines

6-26. What is the difference between isometric drawings and isometric projections?

1. Lines are drawn foreshortened by two-thirds
2. Lines are drawn without the use of a scale in projections
3. Lines are drawn without the use of a scale in drawings
4. Lines are drawn true length

6-27. In comparison to an isometric projection, how does an isometric drawing appear?

1. Larger
2. Smaller
3. More accurate
4. More realistic

6-28. In an isometric drawing, how should you place the object on the plane of projection?

1. With the longest axis vertical
2. With the longest axis horizontal
3. With the shortest axis oblique
4. With the shortest axis parallel to the longest isometric axis

6-29. Changing the position of the isometric axes affects the viewpoint at which the object is seen.

1. True
2. False

6-30. How do circles appear on isometric planes?

1. As obloids
2. As circles
3. As ellipses
4. As parabolas

6-31. When transferring noncircular curves from a multiview drawing to any isometric drawing, what lines should you use?

1. Corresponding projectors on the multiview drawing
2. Corresponding nonisometric lines
3. Corresponding normal lines
4. Corresponding randomly spaced parallel lines

6-32. What feature determines when the diameters of an ellipse are conjugate?

1. When the diameter are parallel to the end tangents
2. When the diameters are perpendicular to the end tangents
3. When the minor diameter intersects the major diameter at 60°
4. When the major and minor diameters are complementary

6-33. A circle with a diameter of 65cm will project obliquely as an ellipse with a major diameter of what size?

1. 35cm
2. 55cm
3. 45cm
4. 65cm

6-34. Angles will only project true size when they are drawn in which of the following ways?

1. Parallel to the isometric axes
2. Foreshortened along the isometric axes
3. Parallel to the plane of projection
4. Perpendicular to the plane of projection

6-35. To draw an angle in an isometric projection, what should you do first?

1. Convert angular measurements to linear measurements
2. Draw the isometric axes
3. Project the angle from the axonometric projection to the plane of projection
4. Make an isometric drawing showing true shape and size

6-36. In an isometric drawing, what tool should you use to measure angles?

1. A protractor
2. A compass
3. An isometric protractor
4. A proportional scale

6-37. When drawing a half section in an isometric drawing, what should be your first step?

1. Drawing the circles in isometric
2. Drawing the cutting plane
3. Drawing the entire object
4. Drawing the portion of the drawing behind the cutting plane

6-38. Which fact remains true regardless of what method of dimensioning you chose?

1. Dimensions should remain consistent throughout the drawing
2. Dimension should read from the right side of the drawing
3. You should indicate tolerances on dimensions
4. You should letter all dimensions in upper-case letters

6-39. How many scales should you use for a dimetric projection?

1. One
2. Two
3. Three
4. Four

6-40. What type of axonometric projection contains two axes that make equal angles to the plane of projection?

1. Trimetric
2. Isometric
3. Dimetric
4. Noncircular

6-41. Which of the following are three primary planes of projection in orthographic projections?

1. Elevation, vertical, and profile
2. Top, bottom, and vertical
3. Horizontal, vertical, and elevation
4. Vertical, horizontal, and profile

6-42 In first-angle projection, the profile plane will show what view?

1. Right side
2. Left side
3. Top
4. Bottom

6-43 Why is third-angle projection considered more logical than first-angle projection?

1. The front view is located on the vertical plane
2. The right side of the object is toward the object's left
3. The top view is depicted above the front view
4. The top view is depicted below the front view

6-44. To draw the three principal views of an object on paper with the paper serving as a vertical plane, what action should you take to draw the top and right-side view?

1. Rotate the paper
2. Rotate the planes clockwise
3. Rotate the planes counterclockwise
4. Rotate the respective planes toward the observer

6-45. What technique should you use to layout the third view in a multiview projection?

1. Mitering
2. Drawing through
3. Rotation
4. Projection

6-46. When you use the miter-line method of laying out a third view, what controls the the distance between the front and right side view?

1. The size of the front and right-side views
2. A scale to measure the length of the miter line
3. Proportional dividers
4. Horizontal movement of the miter line

6-47. **REFER TO FIGURE 6-28 IN YOUR TEXTBOOK.** Given c-size drawing paper (11 x 17" with a 1/2" margin), you are to draw an object with the dimensions of 13 x 10 x 3" in a scale of 2:1. Spacing the views as in figure 6-28B, what is the distance between views?

1. 1
2. 2
3. 3
4. 4

6-48. When spacing the views of a circular object in a drawing, what must you try to equalize?

1. The areas of the views
2. The size of the views
3. The size of the paper
4. The areas of the spaces around and between the views

6-49. When can a one-view drawing completely describe an object?

1. When you state thickness as a dimension or note
2. Whenever the length dimension is on top
3. When all dimensions are equal
4. When objects have no top or bottom

6-50. Multiview projections should contain how many views?

1. Six
2. Two
3. Three
4. As many views as it takes to fully describe an object

6-51. You are given an object that has identical front and back views, identical right- and left-side views, and the bottom view varies from the top view only in that the visible lines of the bottom view are hidden lines in the top view. Using the general rules of view selection for multiview drawings, what views should you select?

1. Top, front, and right-side views
2. Bottom, front, and right-side views
3. Bottom, back, and left-side views
4. Top, back, and left-side views

6-52. When selecting views according to convenience, what general rule should you follow?

1. Show auxiliary views
2. Show the entire object
3. Show the object in the position it customarily occupies
4. Show all visible lines

6-53. When each of three possible two-dimension projections of an object conveys exactly the same information, on what basis should you select the particular view to draw?

1. Number of hidden lines in a view
2. Balanced appearance
3. Position the object normally occupies
4. Dimensions of horizontal margins on the drawing paper

6-54. What drawing technique helps you to identify a particular view of a complex object?

1. Corner point numbering
2. Visible numbering
3. Zone numbers
4. Arrowheads

6-55. Where are hidden corner points placed on a view?

1. Outside the view outline
2. Inside the view outline
3. Inside the dimension lines
4. Outside the dimension lines

6-56. In a multiview drawing, a line parallel to the plane of projection appears in what manner on a plane to which it is oblique?

1. Foreshortened
2. True length
3. Normal
4. Parallel

6-57. In a multiview drawing, a line that is parallel to two of the planes of projection and perpendicular to the third is known as what type of line?

1. Normal line
2. Isometric line
3. Inclined line
4. Dimetric line

6-58. In a multiview drawing, a circle oblique to the plane of projection projects as what geometric shape?

1. An ellipse
2. A circle
3. An oblate ellipsoid
4. A frustum

6-59. You should arbitrarily alter view placement on a multiview drawing if you incorrectly placed the views.

1. True
2. False

6-60. What type of lettering should you use on multiview drawings?

1. Single-stroke gothic
2. Copperplate gothic
3. Bookman bold
4. Helvetica

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